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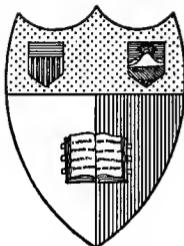
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of
Technical Literature

Part III.

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HANDY LISTS

OF

TECHNICAL LITERATURE

*Reference Catalogue of Books printed in English from 1880 to 1888 inclusive;
to which is added a select list of books printed before 1880 and
still kept on Publishers' and Jobbers' lists.*

COMPILED BY H. E. HAFERKORN AND PAUL HEISE.



PART III.

ENGINEERING AND MECHANICS.

COMPRISED APPLIED AND THEORETICAL MECHANICS, MACHINERY; STEAM AND MARINE ENGINEERING, RAILROAD BUILDING, CONSTRUCTION, ENGINEERING, MANAGEMENT, AND PRACTICE; CIVIL ENGINEERING, SURVEYING, LEVELING, HYDRAULIC AND SANITARY ENGINEERING, SEWERAGE AND DRAINAGE, ETC., MECHANICAL DRAWING. Together with a *supplementary List of Periodicals and Annuals in these Branches.*

MILWAUKEE, WIS.:

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1890.

LONDON: B. F. STEVENS, 4 Trafalgar Sq. BERLIN: A. SEYDEL, Mohren Strasse, 9, W. CHICAGO
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PRESS OF
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A Word to Engineers and others.

Mr. Haferkorn having shown me the proof sheets of Part III of his "Handy Lists of Technical Literature" relating to the subjects of Engineering and Mechanics in all their manifold arteries, I find them apparently complete in what they are designed to be, lists of all English books treating upon the above topics, published since 1880 and a full alphabetical index of all the subjects treated therein, with numerical references to authors, etc. A timely publication, it must become invaluable to the engineer, mechanic or student, as a Key to the English literature upon the above special subjects, enabling him almost at a glance to locate any and all treatises upon any of the topics embraced within the above branches.

The compiler has by his exhaustive labors and researches, covering some 2145 works, performed for the profession the tedious, sometimes perplexing search for information and references and presented the results in a more comprehensive and systematic manner than was ever before attempted.

The simplicity and completeness of this catalogue will truly make them "Handy Lists" of reference to all interested in these special subjects, none of whom will be without them, when once their value is thoroughly understood.

MILWAUKEE, JULY 22nd, 1890.

City Engineer's Office.

G. H. BENZENBERG,

M. A. M. Soc. C. E.

INTRODUCTION.

In a comparatively short time, the third part of the "Handy Lists of Technical Literature" is now ready for distribution, covering the important subjects of Civil and Mechanical Engineering. As to its completeness and thoroughness, there is nothing to add to what I have said before, particularly in view of the strong endorsement of the work furnished by a professional engineer of high repute. An eminent Scotch scientist has lately said that all scientific text-books more than fifteen years old may safely be thrown in the waste-basket or sent to some paper-mill to furnish material for the printing of new works, and if this is true of theoretical science, it is still more so as regards its applications, in a time when the daring genius of the engineer bids fair to reorganize the condition of the universe.

The searcher for information, whether in the field of engineering or mechanics, has therefore very little need of going beyond the period included in this publication, short though it apparently is.

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August 1890.

PREFACE.

THE third part of the "Handy Lists" is arranged on the same general principle as the preceding ones, but a greater amount of care has been bestowed on making the subject entries and cross-references much more full and detailed, with a view of increasing its usefulness as far as possible. For the same purpose, a short *List of new books and editions published in 1889 and 1890* has been added, making the entries practically complete up to the time of printing. A separate *List of Newspapers, Periodicals and Annuals* has also been furnished, and such publications are therefore excluded from the main catalogue, except such *English Periodicals* as are reported to the official trade journals as being sold in yearly, half-yearly, or quarterly volumes.

All the valuable papers in the *Journal of the Iron and Steel Institute*, however, have been indexed under the proper author and subject headings, a feature which, it is hoped, will be appreciated by the users of this part of the "Handy Lists."

The Appendix contains furthermore:

A selection of important books printed before 1880, and entered as they appear in the catalogues of the different booksellers; also

Such books as do not appear in the official catalogues of new publications for 1880-88, because they are merely *reprints* of old editions;

And such books belonging to the period of 1880-88, as are repeatedly included in booksellers' catalogues, but of which the *publisher's name* could not be ascertained.

H. and H.

Explanation of Entries.

The main entry of each work will be found under the author's name, containing full title, year of issue, publisher's or agent's name, editions and price. The *publisher or distributing agent* of each book is indicated by a system of abbreviations, at the end of the entry, which are explained in the accompanying *Key*, containing a list of all publishers and agents represented in this part. For the convenience of booksellers, and especially in order to facilitate procuring books in a hurry, the method of distinguishing the *publisher* of each work, heretofore employed in the key, has in this part been extended to the abbreviations in the main entry, so that the **heavy** letters indicate the *publisher or sole agent*, while those in ordinary light-faced type designate the jobber, to whom the bookseller may apply for copies in case the publisher should be out of the work.

The various editions of a book with their prices, have been specified, including American reprints of English works, the first price mentioned being that of the *original* publication.

If a second value is added, in a *different monetary standard*, it indicates the price at which the book is sold by the jobber or agent stated in connection with each entry.

The exact year of publication has been added in all cases where it could be ascertained, and enclosed in brackets whenever it does not appear on the title-page. When two or more editions have been issued at the same price, the dates of all, but the last have been enclosed in parentheses.

The subject headings are entered in the same alphabetical series as the authors, but are distinguished by being printed in *italics*. The numbers following refer to the numbers prefixed to each entry of a distinct book, and indicate that the subject is treated in the books mentioned.

When a "see" or "see also" precedes a *number*, it signifies that the subject is incidentally treated in the work referred to; but when placed before a *name*, the "see also" indicates other related subjects, which must also be looked up, in order to obtain the whole literature on any given subject.

Works occurring in a preceding part of the "Handy Lists" are referred to under the number attached to, each one in part I or part II, as the case may be, and are not repeated in the present part.

DIRECTIONS FOR USING THE "HANDY LISTS."

If looking for a book by a certain known author, turn to his name in the alphabet. The abbreviation at the end of the book entry refers to the *key*, as explained above.

If in search for books or treatises on a certain subject, turn to this subject, printed in *italics*, as stated above. In case there are more than one work referred to, take a slip of paper and copy all the numbers and cross-references, and, with this for a guide, look up first all the numbers copied, then the numbers under each one of the related subjects referred to.

"In No. 595, 1882, II" signifies the 2d volume for 1882 of 595, which is the *Journal of the Iron and Steel Institute*.

ABBREVIATIONS.

add.	additional,	Diag.	diagrams.	Introd.	introduction.	Roy.	Royal.
addit.	additions.	diag.		jr.	junior.	School Bull.	Pub.
Adv. Sci. Ser.	Advanced Science Series.	deg.	degree.	L. Ele. Sc. Man. or		School Bulletin	Publications.
Anon.	Anonymous.	Dec.	December.	L. Elem. Sci. Man.		Sci. Ser.	Science Series.
Balt.	Baltimore.	ea.	each.	Longman's Elementary Manuals.		Scient. Manuals	Scientific Manuals.
bds.	boards (bound in board cover).	Ed.	edition, edited,	La.	large.	ser.	Series.
Bevan's	B. M. I. Bevan's British Manufacturing Industries.	ed.	editor.	la.		shp.	sheep (binding).
Bost.	Boston.	Elem. Ser.	Elementary Series.	Ibs.	Pounds (weight)	Sm.	small.
Bull. Pub.	Bulletin Publications.	enl.	enlarged.	Lib.	Library.	sm.	
Cam b. Math. Ser.	Cambridge Mathematical Series.	F. cap.	Foolscap octavo.	lithog.	lithographed.	Spec.	Ser. Special-ist's Series.
Camb. Sch. and Coll.	T. B. Cambridge School and College Text Books.	Franklin Sq. Lib.	F. Square Library.	Lond.	London.	Sq.	Square.
Cass. Tech. Man.	Cassel's Technical Manuals.	Ga.	Georgia.	long.	longitude.	Stand.	standard.
Chic. Chicago.		geneal.	genealogy.	Manch.	Manchester.	Subs.	subscription,
clo.	cloth (binding).	halfmor.	halfmorocco (binding).	Mass.	Massachusetts.	subs.	(sold by sub-
col.	colored.	half rus.	half russia (binding).	Med.	Medium Octavo.	script).	scription).
color.		hist.	historical series.	mor.	morocco.	suppl.	supplement.
Collins' Sci. Text Books.	Collins' Science Text Books.	Ill.	Illinois.	Murby's Sci. and Art Ser.	Murby's Science and Art Series.	Textb.	of Sci., Textbooks of S.
Comp. compiler, compiled.		Illus.	illustrated.	Octavo.		thous.	Textbooks of Science.
cont. contained.		Imp.	Imperial octavo.	obl.	oblong.	trans.	thousand.
corr. corrected.		Improv.	Improved.	obl.		translated.	
Cr. Crown.		in.	inches.	o. o. p.	out of print.	U. S.	United States.
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		Sci. Ser.	tional Series.	Phila.	Philadelphia.	W. pl.	with plates.
		Intern.	International Science Series.	Pl.	plates.	Wash.	Washington.
				P.	Post Octavo.	Weale's Ser.	Weale's Series.
				8vo.			
				portr.	portraits.		
				port.			
				pp.	pages.		
				red.	reduced.		
				rev.	revised.		

\$ Dollar; c. Cents: £ Pound of Sterling; s. Shilling; d. Pence.

All other abbreviations are self-explanatory.

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Users of part I will also strike out No. 386 as not being a technical publication.

The publishers of No. 735 Musket, 1024 Summerson, and 1061 Tibbs could not be traced. Orders for these should be placed with E. & F. N. Spon or D. Van Nostrand Co.

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- 5 **Abernethy, J. P.** An outline of commercial and railway telegraphy. Railway station and express service, arranged in questions and answers. 4th rev. and enl. ed., illus. Cleveland, O. 1886. 12mo. \$2.00. Mu—Su—Rm. *Abstracting dimensions, see 1957.*
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Accidents, see Break downs.
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Water-waste prevention 711.

Water wheels 1297, 1385, see 9, 42, 722, 726, 935, 1038, 1134, 1450, 1918, 1964, 2091, 2143; see also *Efficiency of Water Wheels*—*Testing of Water Wheels*—*Turbines*.

Water works 115, 316, 550, 555, 827, 957, see 223, 294, 711, 722, 726, 844, 993, 1366, 1550, 1918; see also *Brooklyn Water Works*—*Cincinnati Water W.*—*Engines for Raising Water*—*Fittings*—*Hydraulic Engin.*—*Hydraulics*—*Hydrometry*—*Liverpool Water W.*—*Manchester Water W.*—*Ossett Water W.*—*Pipe-joints*—*Pipes for Water-engin.*—*Pumping Engines*—*Testing Pipes*—*Water Supply*—*Water Works of London*.

Water works of London 1366.

Water works statistics 499, 500, 501.

1124 **Watkins, J.** Comparison of the numbers and sizes of the new legal standard wire gauge with previously known numbers and sizes of the Birmingham wire gauge, and the values in 1000ths of an inch or mils. Lond. 1884. On large sheet, 1s, 40c. Su.

Contents: The new legal standard wire gauge 7 to 50—Correct values of the B. W. gauge in divisions of an inch, 64ths of an inch, 1000ths of an inch—Millimeters, values as given by various authorities in 1000ths of an inch, values as given in 1000ths of an inch at the British Association, by Latimer Clark, M. Inst. C. E.—Watkins' universal cent gauge for describing the sizes of wire or plate metal, from 1 to No. 50.

1125 **Watson's mechanical test cards.** 7 standards. Lond. 1887. In packets, 1s each. Si.

1126 **Watson, E. P.** Manual of the hand-lathe, comprising concise directions for working all kinds of metals, ivory, bone, and precious woods, dyeing, colouring, and French polishing, inlaying by veneers, and various methods, practised to produce elaborate work with despatch, and at small expense, etc. Illus. Phila. (1879) 1885. 12 mo, (P. 8vo) \$1.50; 6s. Ba—Cp—Ct—Mu—Su—Va.

1127 **Watson, E. P.** Modern practice of American machinists and engineers: including the construction, application, and use of drills, lathe tools, cutters for boring cylinders, and hollow work generally, with the most economical speed for the same; the results verified by actual practice at the lathe, the vise, and on the floor. Together with workshop management, economy of manufacture, the steam engine, boilers, gears, belting, etc. Illus. Phila. (1880) 1886. 12mo, (P. 8vo) \$2.50, 10s 6d. Ba—Cp—Ct—Mu—Su—Va.

1128 **Watson, E. P.** The professor in the machine shop. Reprinted from "The Mechanical Engineer." Rev. and enl. ed. Illus. N. Y. 1886. 16mo, \$1.25. Ba—Va—Wc.

Watt, James, inventions of, see 1745.

Wave and vortex motion 311.

Wave forms, see 848.

1129 **Webb, F. W.** The endurance of steel rails. *In* No. 595, 1886, I.

1130 **Wedding, H.** Properties of malleable iron deduced from its microscopic structure. *In* No. 595, 1885, I.

1131 **Wedding, H.** The iron industry of Germany. *In* No. 595, 1880, II.

1132 **Wedding, H.** The Royal Prussian institutes for testing iron and steel, at Berlin. *In* No. 595, 1882, II.

1133 **Wegmann, E.** The design and construction of masonry dams; giving the method employed in determining the profile of the Quaker Bridge Dam. Illus. by types showing the high masonry dams of the world. W. 48 pl. N. Y. 1888. 4to, \$5.00. Ba—Wi.

Weight calculator 1346.

Weights, see 1862.

Weights of angles and tees 266, 1148.

Weights and sizes of iron plates, see 1613.

Weights of castings, see 783, 1184.

Weights of cast iron, see 1591.

Weights of copper 1591.

Weights of copper, brass, and lead, see 1591.

Weights of heads and nuts for bolts 1591.

Weights of hoop iron, see 1591.

Weights of iron 442, 795, 796, see 2129.

Weights of iron and steel 1032, 1628.
Weights of iron exported, see 1484.
Weights of malleable bar iron, see 1591.
Weights of materials, see 985.
Weights of Metals 124, see 726, 1184, 1881.
Weights of moveable parts of engines, see 852.
Weights of rail of narrow gauge railways, see 1476.
Weights of rails 1351.
Weights of rolled iron, see 1591.
Weights of sheet of malleable iron 1591.
Weights of steel and iron used for ship-building, see 1184.
Weights of steel exported, see 1484.
Weights of various metals, see 1554.

1134 **Weissbach, J.** Manual of the mechanics of engineering and of the construction of machines, for the use of engineers, etc. 3 vols. N.Y. 1883-88. 8vo, \$25.00. Ba—Cp—Mu—Va—Wi.
 Vol. I. Theoretical mechanics, with an introduction to the calculus, designed as a textbook for technical schools and colleges, and for the use of engineers, etc. 7th rev. ed., trans. from the 4th German ed. by E. B. Coxe. Illus. N. Y. 1885. 8vo, \$10.00; shp. \$11.00.
 Vol. II. Application of mechanics to machines, part I: hydraulics and hydraulic motors. With many practical examples for the calculation and construction of water-wheels, including breast, undershot, back-pitch, overshot wheels, etc., as well as a special discussion of the various forms of turbines. 2d ed., trans. from the 4th German ed. by A. J. Du Bois. Illus. N. Y. (1878) 1888. 8vo, \$5.00; Part II: theory of the steam engine. Trans. from the 4th German ed. by A. J. Du Bois. With notes giving practical examples of stationary, marine and locomotive engines, showing American practice, by R. H. Buel. Illus. N. Y. (1878) 1887. 8vo, \$5.00; vol. II, parts I, II in one vol. \$10.00.
 Vol. III. Mechanics of machinery of transmission. Designed as a textbook for technical schools and colleges, and for the use of engineers, draughtsmen, etc. 2d rev. and enl. ed. by G. Herrmann, trans. by J. F. Klein. Illus. N. Y. 1883. 8vo, \$5.00.
Welding, 1598, see 9.
Well-digging 1952.

1135 **Wellington, A. M.** The economic theory of the location of railways. An analysis of the conditions controlling the laying out of railways to effect the most judicious expenditure of capital. 3d rev. and enl. ed., w. illus. and tables. N. Y. (1877, \$2.00; 1887) 1888. 8vo, \$5.00. Ba—Cp—Mu—Rc—Su—Wi.
Wells, see 993, 1252, 1525, 1602; see also Boring Wells—Construction of Wells—Sinking Wells—Pumps—Well Sinking.
Well sinking and boring, see 997.

1136 **West, Th. D.** American foundry practice. Treating of loam, dry sand and green sand moulding, and containing a practical treatise upon the management of Cupolas, and the melting of iron. 6th ed. illus. N. Y. 1887. 12mo, \$2.50. Ba—Cp—Mu—Su—Wi.

1137 **West, Th. D.** Moulder's text-book, being part II of American foundry practice. A practical treatise on moulding, discussing the question of economy in casting, and the arrangement of a foundry in regard to rapid work. Treating of cupolas, methods of firing, best means of securing perfect and sound castings, etc., being a continuation of Vol. I on this subject, and dealing with a class of work requiring more skill and greater care. 3d ed. Illus. N. Y. 1885. 12mo, \$2.50. Ba—Cp—Su—Wi.
Westinghouse automatic and air brake gear (plate of), see 19.
Wheel cutting machine, see 1340.

1138 **Wheeler, J. B.** An elementary course on civil engineering, for the use of the cadets of the United States Military Academy. New rev., corr. and enl. ed. Illus. N. Y. (1877) 1888. 8vo, \$4.00. Ba—Cp—Ct—Mu—Wi.

1139 **Wheeler, W. H.** Hints to highway surveyors on the repair of main roads. Lond. 1880. 8vo, Pap. 6d, 20c. Su.

1140 **Wheeler, W. H.** The drainage of fens and low lands by gravitation and steam power. W. 8 pl. Lond. 1888. 8vo, 12s 6d, \$4.00. Ba—Su.

Wheel gearing, see 726.

Wheels 194, see 382, 502, 726, 781, 2129; see also **Keys for Pulleys**, **Wheels**—**Odontograph**—**Teeth of Wheels**—**Useful rules for Wheel-wrights**.

Wheels of a locomotive, see 21.

Wheel trains, see 2113.

Whistler, Geo. W. Civil engineer 2014.

1141 **Whitaker, C.** Wood-working tools, and how to use them. The uses of the hammer, knife, plane, rule, chalk-line, square, gauge, chisel, saw and auger. Illus. Bost. 1881. 12mo, 50c. Ba—Cp—Gd—Ho.

Whitworth, Sir J., see 1621.

1142 **Wiborg, J.** Description of a new air-pyrometer. In No. 595, 1888, II. Wiley's iron trade manual 1433.

1143 **Wilkins, H. St. C.** Treatise on mountain roads, live loads, and bridges. W. pl. Lond. 1880. 8vo, 14s, \$5.50. Cp—Mu—Su.

1144 **Williams, C. W.** Fuel: its combustion and economy. Being an abridgement of "a treatise on the combustion of coal and the prevention of smoke." With extensive additions on recent practice in the combustion and economy of fuel, coal, coke, wood, peat, petroleum, etc., by D. K. Clark. Illus. (Weale's Ser.) Lond. 1886. 12mo, 3s 6d, 4s, \$1.40, \$1.60. Ba—Cp—Lm.

1145 **Williams, C. W.** On heat and its relation to water and steam, embracing new views of vaporization, condensation and explosions. Illus. Phila. 1884. 8vo, \$3.50. Ba—Cp—Va.

1146 †**Williams, F. S.** Our iron roads, their history, construction, and administration. 7th rev. ed. Illus. Lond. (1883, '84), Demy 8vo, (8vo) 12s, \$5.00. Bi—Bk—Ba—Cp.

1147 **Williams, F. S.** The Midland Railway. Its rise and progress. A narrative of modern enterprise. 3d ed. Illus. Lond. 1883. Demy 8vo 12s. Bi—Bk.

1148 **Williams, G.** Tabulated weights of angle and tee iron. Lond. 1883. Obl. 32mo, 2s 6d. Su.

1149 **Williams, P.** Iron and steel permanent way. In No. 595, 1881, I.

1150 **Williams, W. M.** Simple treatise on heat. Illus. Lond. 1880. P. 8vo, (12mo) 2s 6d, \$1.25. Cl—Va.

1151 †**Williamson, B.**, and Tarleton, F. A. An elementary treatise on dynamics, containing applications to thermo-dynamics, with many examples. Lond. 1885. Cr. 8vo, 10s 6d. Lo.

1152 **Willis, A.** Reactions in the open-hearth process. In No. 595, 1880, I.

1153 **Willis, R.** Extracts from the second edition of principles of mechanism, designed for the use of students in the universities, and for engineering students generally. Describing those models considered by the department of science and art to be indispensable for the efficient teaching of subject VII. Applied mechanics, including the original diagrams, with new illustrations of these models as they were finally approved by Prof. Willis, for use in class instruction. Lond. 1888. Demy 8vo, 1s. R†.

1154 **Wilson, A.** Water gas as used for metallurgical purposes. In No. 595, 1888, I.

1155 **Wilson, F. J. F.** Typographic printing machines and machine printing. 4th ed. Illus. Lond. 1888. P. 8vo, (12mo) 5s, \$2.50. Ba—Wy.

1156 **Wilson, F. J. F.**, and Grey, D. Practical treatise upon modern printing machinery and letterpress printing. Illus. Lond. 1888. Roy. 8vo, £1 1s, \$10.00. Ce.

1157 **Wilson, F. R.** Practical guide for inspectors of nuisances. Lond. 1881. P. 8vo, (12mo) 4s 6d, \$2.00. Ba—Ke.

1158 **Wilson, R.** The screw propeller: who invented it. 2d. ed., with appendix. Illus. Lond. 1881. 8vo, Pap., 1s, 40c. Su.

1159 **Wilson, R.** Treatise on steam boilers: their strength, construction and economical working. 5th ed. Illus. Lond. 1883. 12mo, 6s, \$2.50; see also No. 2142. Ba—Cp—Lm—Mu—Va.

1160 **Wilson, R.** Boiler and factory chimneys: the draught-power and stability: With a chapter on lightning conductors. 2d ed. Lond. (1877) 1887. Cr. 8vo, (12mo) 3s 6d, \$1.50. Ba—Cp—Lm—Va.

Winches, see 42.

Winding Engines, see 42, 2091, 2143.

Wind-mill as a prime mover 1163.
Windmills, see 502, 722.

1161 **Winslow, A.** Stadia surveying. The theory of stadia measurements, accompanied by tables of horizontal distances and differences of level for the reductions of stadia field observations. (V. N. S. S.) N. Y. 1884. 18mo., bds. 50c. Ba—Mu—Va.

Wire bridges, see 1325.

Wire Gauge 859, 1124, see 345; see also English *Wire Gauge*.

Wire-nail works in U. S., see 2096.

Wire-rod and wire mills in U. S., see 2096.

1162 **Wittgenstein, K.**, and Kurzwernhart, A. The manufacture of steel with brown coal at Teplitz. *In* No. 595, 1882, II.

1163 **Wolff, A. R.** The windmill as a prime mover. Comprehending everything of value relating to windmills, their use, design, construction, etc. Illus. N. Y. 1886. 8vo, \$8.00. Mu—Wi.

1164 **Wood, Benj.** Comprehensive guide to the steam engine indicator and its diagrams. Lond. 1880. 8vo, half bound, \$5.00. Ba—Cp—In—Va.

1165 **Wood, C.** The value of Silicon pig to the iron founder. *In* No. 595, 1885, II.

1166 **Wood, De V.** The elements of analytical mechanics. With many examples, for the use of schools and colleges. New 2d rev. and enl. ed., comprising mechanics of solids and of fluids. Illus. N. Y. (1876) 1882. 8vo, \$3.00. Cp—Wi.

1167 **Wood, De V.** The mechanics of fluids; being supplement to the analytical mechanics, (and sold separately to supply those who have the mechanics of solids). N. Y. 1882. 8vo, \$1.50. Cp—Wi.

1168 **Wood, De V.** Principles of elementary mechanics. 7th rev. ed. Illus. N. Y. (1882) 1887. 12mo, \$1.25; supplement and key to the same, \$1.25. Ba—Cp—Wi.

1169 **Wood, De V., ed.** Treatise on civil engineering. Rev. and ed., with additions, new plates, appendix, and a complete index. Also, chapter on river improvements, by E. A. Mahan. W. pl. N. Y. 1886. 8vo, \$5.00. Cp—Mu—Wi.

1170 **Wood, De V.** Treatise on the theory of the construction of bridges and roofs. Designed as a text-book and for practical use. 2d rev., and corrected ed. Illus. N. Y. (1876) 1880. 8vo, \$2.00. Ba—Cp—Ct—Wi.

1171 **Wood, H. G.** The law of railroads. 3 vols. Bost. 1885. 8vo, shp. \$15.00. St.

Wood and its uses in engineering, see 1435.

1172 **Woodbury, C. J. H.** Fire protection of mills. With many illustrations. A practical and scientific view of the best methods to prevent conflagrations in cotton, flour, and other mills. Showing forms of apparatus for extinguishing flames, and methods of preventing their occurrence. With a chapter on proper construction of floors, and proportioning of floor beams. Also, a thorough explanation of the electric light as applied to mills, and the regulations for its use adopted by the insurance companies. Illus. N. Y. 1882. 8vo, \$2.50. Ba—Cp—Mu—Wi.

1173 **Woodcock, G. E.** The mutual relations of carbon and iron in steel. *In* No. 595, 1882, I.

Wood conversion by machinery 1837.

Wooden columns 635.

Wood pavement 31, 2002.

1174 **Woods, A. T., and Stahl, A. W.** Elementary mechanism: text-book for students of mechanical engineering. Illus. N. Y. 1885. 12mo, \$2.00. Cp—Va.

Wood screws, see 1201.

1175 **Woodward, C. M.** History of the St. Louis bridge, containing a full account of every step in its construction and erection, and including the theory of the ribbed arch, and the tests of materials. Illus. and pl. St. Louis, Mo., 1881. 4to, \$20.00; half mor. \$25.00 net. Ba—Cp—Jb—Va.

Wood working, see *Chalk Line—Planing Mills*.
 A more complete list on wood working will be found in part I.

Wood working factories 872.

Wood working machinery 69, 872, see 726, 1836, 1918, 2135.

Wood working tools 1141.
Work done by fire streams 1446.
Worked examination questions in plane geometrical drawing 557.
Working and management of an English railway 1472.
Working drawings 508, 1176.
Working drawings of engine houses 1404.
Working drawings of stations 1404.
Working drawings of workshops, see 1404.
Work manager's handbook 562.
Workman's manual of engineering 701.
Workshop appliances 945.

1176. **Workshop** Book: practical problems and lines for working drawings. Lond. 1885. Sq. 16mo, 2s 6d. **Si.**
Workshop companion 124, 2065.
Workshop machinery, see 259, 1340.
Workshop management 1898.
Workshop manipulation 1885.
Workshop receipts 480, 657, 658, 998, 1920.
Workshops, see *Administration—Economic Conduct of Workshops—Lectures in a Workshop—Railway Workshops*.
Workshops (Railway), see also *Working drawings of Workshops*.
Workshops, Sanitation in, see 2099.
Works in iron 1718.

1177 **Wormell, R.** Elementary course of hydrostatics and sound. 2d ed. Lond. 1881. P. 8vo, (12mo) 3s 6d, \$1.20. **Cp—Gq—Va.**
1178 **Wormell, R.** Lectures on heat: elementary textbook for students. 2d ed. Lond. 1884. 8vo, 1s. **Mv.**

1179 **Wright, A. W.** American street railways; their construction, equipment, and maintenance. Illus. Chic. 1888. 12mo, flex. lea., \$5.00 **Ba—Rm.**
N. B.—Contains: Track construction; paving; track cleaning; equipment; buildings for street railways; management of street railways.

1180 **Wright, T. W.** Treatise on the adjustment of observations; with applications to geodetic work and other measures of precision. Illus. N. Y. 1884. 8vo, \$4.00. **Mu—Va.**

1181 **Wrightson, Thos.** On some physical changes occurring in iron and steel at high temperatures. *In* No. 1629, 1879, II; and *in* No. 595, 1880, I.

1182 **Wrightson, Thos.** New centre crane for Bessemer steel work. *In* No. 595, 1883, II.
Wrinkles and recipes 1265.
Wrought iron 792, 1099a; see also *Architectural Wrought-iron—Strength of Wrought-iron*.
Wrought iron and steel 1644.
Wrought iron beams, see 1960, 2092.
Wrought-iron, application of, in bridgebuilding, see 1325.
Wrought-iron Bridges and Girders 1601, 1604, 2008, see 1464.
Wrought-iron for building purposes 1464, see 1099a.
Wrought iron for gun carriages 242.
Wrought-iron Girders 1604, 1664, see 1770.
Wrought-iron permanent way 2059.
Wrought-iron pipe works, in U. S., see 2096.
Wrought iron work 1438; see 1099a, see also *Designing Wrought-iron Work*.
Wrought iron works (Artistic) 32.

1183 **Wurtele, A. S. C.** Standard measures of U. S., Great Britain and France: historical and actual comparisons; with an introd. of the metre. Lond. 1882. Roy. 8vo, Pap., 2s, 80c. **Su.**

1184 **Wylie, C.** Iron and steel founding. W. Diagrams. Sunderland 1881. P. 8vo, 3s 6d; the same, 2d rev. and enl. ed. w. 39 diagrams. Sunderland 1888. P. 8vo, (12mo) 5s, \$2.00. **Ba—Mu—Rh—Si—Su.**

1185 **Wylie, C.** Treatise on iron founding. Illus. w. diagrams. Sunderland 1885. P. 8vo, (12mo) 2s 6d, \$1.00. **Mu—Rh—Si—Va.**
N. B.—A new (second) ed. published in 1889 at the same price.

Yacht engines, see 1375.
Young engineers own book 900.
Young mechanic 665.

1186 **Zeuner, G.** Treatise on valve-gears, with special consideration of the link-motions of locomotive engines. New rev. and enl. ed., trans. from the 4th German ed. by J. F. Klein. W. pl. Lond. 1884. 8vo. 12s 6d, \$5.00. Ba—Cp—Mu—Su—Va.
Zinc 1519; a more complete list in part I.
Zincworking, see 312.

1187 **Zwicker, P. H.** Instructor for procuring stationary and steam engineer's license. St. Louis, Mo. 1887. 24mo, \$2.00; see also No. 2145. Hk—Z

APPENDIX.

Select List of books printed before 1880 and still kept on publishers' or jobbers' lists.

N. B.—If a dagger † appears before the title it denotes that the DATE of publication could not be traced, but that the book is inserted in "Whitaker's Reference Catalogue," 1889.
 If the YEAR appears in brackets [] it designates that the book was copyrighted in that year, but the year does not appear on the title-page.

The year of the FIRST or a FORMER edition is given in parenthesis ().

In cases where an English book is handled by an American importer and vice versa, the size mentioned in the importer's catalogue appears in parenthesis ().

When the place, where the book may be had, appears in parenthesis, thus (Phila. 1878) it designates that the place of publication could not be found.

1188 **Abel, C. D.** Elementary principles of machinery in its construction and working. (Weale's Ser.) Illus. Lond. (n. d.) 12mo, 1s 6d, 60c. Cp—Lm.

1189 **Abel, C. D.** Rudimentary and elementary principles of the construction and on the working of machinery. (Weale's Ser.) Lond. (n. d.) \$3.30. Va.

1190 **Abernathy, R. J.** Practical hints on mill building. Illus. Moline, Ills., (n. d.) \$4.00. Ba—Mu.

1191 †**Acworth, W. M.** The railways of England. Illus. Lond. (n. d.) 8vo. Mx.

1192 **Adams, C. F., jr.** Notes on railroad accidents, their causes and prevention. N. Y. 1879. 12mo, \$1.25. Ba—Cp—Pu—Rm—Va.

1193 **Adams, C. F., jr.** Railroads and railroad questions. Rev. ed., with appendix. N. Y. (n. d.) 12mo, \$1.25. Ba—Pu—Rm.

1194 **Adams, C. F., jr.** Railroads; their origin and problems. N. Y. [1878.] 12mo, \$1.25. Ba—Pu—Rm.

1195 †**Adams, H.** Designing wrought and cast iron work.
 Part I: Wrought and cast iron girders. Intended for the use of draughtsmen commencing on iron work. The information consists of descriptive notes, detailed calculations, estimates of weight and cost, and complete designs. With 2 large plates.
 Part II: Notes, calculations, stress diagrams, and working drawings for a lattice girder bridge between two warehouses.
 Part III: Notes for a rolled iron girder and flitched beam, with comparisons of strength of various parts.
 Part IV: Notes for a trussed fir beam, with a rolling load, a cast-iron stanchion, and riveted joints. Lond. (n. d.) Demy 8vo, pap. each 1s 6d, 60c. Su.

1196 †**Adams, H.** Hydraulic machinery, past and present. A lecture delivered to the London and Suburban Railway Official's Association. W. pl. Lond. (n. d.) 8vo, pap. 1s, 40c. Su.

1197 †**Adams, H.** Joints in woodwork, a paper. W. pl. Lond. (n. d.) 8vo, pap. 1s, 40c. Su.

1198 **Adamson, D.** On high-pressure steam generally and its application to quadruple engines. *In* No. 1629, 1875, II.

1199 **Adamson, Dan.** On the mechanical and other properties of iron and mild steel. *In* No. 1629, 1878 II; 1879, I.

1200 **Ainslie, J.** Land surveying. New and enl ed., embracing railway, military, marine, and geodetical surveying, by Wm. Galbraith. W. atlas. Edinburgh 1849. 8vo, \$9.00. Cp.

1201 †**Aitken, W. C.** Guns, nails, locks, wood screws, railway bolts, and spikes, buttons, pins, needles, saddlery, electroplate. (Bevan's B. M. I.) Lond. (n. d.) P. 8vo, 3s 6d. Sv.

1202 **Akerman, R.** On hardening iron and steel. *In* No. 1629, 1879 II.

1203 **Akerman, R.** On the present state of the iron manufacture in Sweden. W. map. Bost. 1878. 4to. \$1.75. H*

1204 **Akerman, R.** Recent advances in the manufacture of iron and steel. *In* No. 1629, 1878, II.

1205 †**Alban, E.** The high-pressure steam engine, an exposition of its comparative merits, and an essay towards an improved system of construction. Trans. from the German, with notes by Dr. Pole. W. pl. Lond. 1848. 8vo, 16s 6d, \$7.00. Ba—Cp—Lm—Va.

1206 **Alden, Geo. I.** Notes on Rankine's applied mechanics. Hartford 1877. 12mo, \$1.75. Cp.

1207 †**Aldis, W. St.** An introductory treatise on rigid dynamics. (Camb. Math. Ser.) Lond. (n. d.) 4s. Bh.

1208 **Allan, A.** Strength of beams under transverse loads. (V. N. S. S.) N. Y. 1875. 24mo, bds. 50c. Ba—Cp—Su—Va.

1209 **Allan W.** Theory of arches. (V. N. S. S.) N. Y. 1874. 24mo, bds., 50c. Ba—Cp—Su—Va.

1210 †**Allen, J. R.** Theory and practice in the design and construction of dock walls. Lond. 1876. Cr. 4to (4to) 6s, \$2.50. Ba—Cp—Su.

1211 **Allen, Z.** Philosophy of the mechanics of nature, and the source and modes of action of natural motive power. Illus. N. Y. 1852. 8vo, scarce, \$4.50. Cp.

1212 **Amateur mechanic's workshop (The).** Containing plain and concise directions for the manipulation of wood and metals. Lond. 1870. 8vo. \$3.00. Ba—Cp—Va.

1213 †**Anderson, J.** On the strength of materials and structures: the strength of materials as depending on their quality and as ascertained by testing apparatus; the strength of structures, as depending on their form and arrangement, and on the materials of which they are composed. Illus. (Textbooks of Sci.) Lond. 1872. F.cap. 8vo, (12mo), 3s 6d, \$1.25. Ba—Lo—Mu—Va.

1214 **Anderson, J.** The same. N. Y. 1872. 12mo, \$1.50. Ak—Cp—Va.

1215 **Anderson, R. C.** Tables for facilitating calculation in earthen and masonry dams. Lond. 1876. 8vo, \$16.80. Cp.

1216 **Andre, G. G.** Draughtsman's handbook of plan and map drawing, including instruction for the preparation of engineering, architectural, and mechanical drawings. Illus. Lond. 1874. Cr. 4to, \$3.75. Ba—Cp—Su.

1217 †**Andre, G. G.** Mining machinery, a descriptive treatise on the machinery, tools and other appliances used in mining. W. 182 plates, drawn to scale. 2 vols. Lond. [1878.] Roy. 4to, (4to) \$15.00. Cp—Su—Va.

1218 †**Andre, G. G.** Rock blasting: a practical treatise on the means employed in blasting rocks for industrial purposes. W. pl. Lond. 1878. 8vo, \$3.00. Cp—Su—Va.

1219 †**Ansted, D. T.** Water and water supply. I: surface waters. Lond. 1878. Demy 8vo (8vo), 18s, \$7.25. Ac—Ba—Cp—Va.

1220 **Appletons' Pacific Railroads.** W. map and Illus. N. Y. (n. d.) Sm. 4to, pap., 50c. Ak.

1221 **Argument (The), for state railroad ownership.** N. Y. (n. d.) pap., 25c. Rc—Rm.

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Bulletin of American Iron and Steel Association. Wednesday. Ed. by James M. Swank. \$4.00 per year. Office: 261 S. 4th St., Philadelphia, Pa.

Calvert's Mechanic's Almanack and Workshop Companion. Illus. Annually. November. 4d. Pub. by J. Calvert, Great Jackson St., Hulme, Manchester.

Calvert's Mechanic's and Builder's Pocket book. Annually. November. 6d. Pub. by J. Calvert, Great Jackson St., Hulme, Manchester.

Calvert's Sheet Memoranda and Calendar. Annually. November. 1d. Pub. by J. Calvert, Great Jackson St., Hulme, Manchester.

Canadian Magazine of Science and the Industrial Arts and Patent Office Record. Monthly. \$2.50 per year. Pub. by the Burland Lithographic Co., lim., Montreal.

Car. Monthly. Ed. by W. W. Hess. \$1.00 per year. Pub. by the Car Pub. Co., 423 Walnut St., Philadelphia, Pa.

Clay Worker. Monthly. \$1.00 per year. Pub. by T. A. Randall & Co., Indianapolis, Ind.

Colliery Engineer. Monthly. \$2.00 per year. Ed. and pub. by Thos. J. and Rufus J. Foster, Scranton, Pa.

Contractor's Chronicle. Monday. 6d. Office: 27 Chancery Lane, W. C., and 21 Furnival St., E. C., London.

Dixie. (Mechanical) Monthly. \$1.00. Pub. by The Dixie Co., Atlanta, Ga.

Electrical, Mechanical and Milling News. Monthly. Ed. and pub. by Chas. H. Mortimer, Toronto, Ont., Canada. \$1.00 per year.

Engineer. Illus. Friday. 6d. Pub. by G. L. Richie, 163 Strand, W. C., London.

Engineer. Bi-weekly. Ed. and pub. by Egbert P. Watson & Son. \$2.00 per year. Office: 150 Nassau St., New York, N. Y.

Engineer and Iron Trades Advertiser. Thursday. 2d. Pub. by A. R. Goldie. Mitchell Lane, Buchanan St., Glasgow.

Engineering. Illus. Friday. 6d. Ed. by Wm. H. Maw and James Dredge. Pub. by C. Gilbert, 35, 36 Bedford St., Strand, W. C., London.

Engineering and Building Record and Sanitary Engineer. Weekly. Ed. by Henry C. Meyer. \$4.00 per year. Pub. by Wm. Gibson, jr., 277 Pearl St., New York, N. Y., and London: a fortnight later than at New York, 6d per number, Agent: R. J. Bush, 92 Fleet St., E. C., London.

Engineering and Mining Journal. Saturday. Ed. by Rich. P. Rothwell. \$4.00 per year. (The export edition is issued monthly). Pub. by the Scientific Pub. Co., 27 Park Place, New York, N. Y.

Engineering News and American Railway Journal. Saturday. Ed. by D. McN. Stauffer and A. M. Willington. \$5.00 per year. Pub. by the Engineering News Pub. Co., 97 Tribune Building, Printing House Square, New York, N. Y.

English Mechanic. Illus. Friday. 2d. Pub. by E. J. Kibblewhite, 332 Strand, W. C., London.

Farm Implement and Hardware. Monthly. Ed. by J. Newton Nind. \$1.00 per year. Pub. by the Farm and Implement Pub. Co., Minneapolis, Minn.

Farm Implement News. Monthly. Ed. by C. W. Marsh. \$1.00 per year. Pub. by E. J. Baker, 325 Dearborn St., Chicago, Ill.

Farm Machinery. Monthly. Ed. by C. K. Reifsneider. \$1.00 per year. Pub. by the Midland Pub. Co., 506 Olive St., St. Louis, Mo.

Fire and Water. Saturday. \$8.00 per year. Office: 14 Cortlandt St., New York, N. Y.

Fireman's Herald. Thursday. \$1.50 per year. Pub. by the Fireman's Pub. Co., 173 Broadway, New York, N. Y.

Frog. (Railroads) Semi-monthly. Ed. and pub. by Cy. Warman, Denver, Colo. \$2.00 per year.

Hardware. Friday. \$2.00 per year. Ed. and pub. by J. B. McLean, Toronto, Ont., Canada.

Hardware, Metals and Machinery. Monthly, issued on the 15th. 6d. Pub. by V. and R. Blakemore, 38 Charlotte St., Birmingham.

Heraphat's Railway and Commercial Journal. (Formerly *Railway Magazine*) Saturday. 5d. Pub. by W. Footman, 3 Red Lion-Court, Fleet St., E. C., London.

Horse-shoer's and Hardware Journal. Monthly. Ed. by I. A. Fleming. \$1.00 per year. Office: 134 Van Buren St., Chicago, Ill.

Illustrated Journal of Useful Inventions. Monthly. \$1.00 per year. Office 744 Broadway, New York, N. Y.

Implement and Farm Journal. Monthly. Ed. by H. H. Palmer. \$1.00 per year. Pub. by the Kansas City Implement and Farm Journal Co., Kansas City, Mo.

Implement and Machinery Review. (Formerly *Implement Manufacturer's Review*). Monthly. 8d. Pub. by H. Westcott, 28 Budge Row, Cannon St., E. C., London.

Implement World. Monthly. \$1.00. Pub. by the Easter Pub. Co., 115 Dearborn St., Chicago, Ill.

Industrial World and Iron Worker. Thursday. Ed. by F. W. Palmer. \$3.00 per year. Office: 51 La Salle St., Chicago, Ill.

Industries. Illus. Comprising Engineering, Electricity, Chemistry, etc. Office: 70 Market St., Manchester, and 22 Wellington St., London.

Inventive Age. Bi-weekly. Ed. and pub. by James S. and R. G. Dubois. \$1.00 per year. Office: 715 11th St., N. W., Washington, D. C.

Iron. Illus. Friday. 6d. (Formerly *Mechanic's Magazine*). Ed. by Perry F. Nursey, C. E. Pub. by P. A. Kirk, 161 Fleet St., E. C., London.

Iron. Monthly. Ed. by Wm. H. Wahl. \$2.00 per year. Office: Drexel Building, Philadelphia, Pa.

Iron Age. Weekly edition: Thursday. Ed. by A. O. Kittredge. \$4.50 per year; Semi-monthly ed. \$2.80; Monthly ed. \$1.15. (A portion of the subscribers receive the *Iron Age Bulletin* (a weekly) free of charge). Pub. by Dav. Williams, 66, 68, Duane St., New York, N. Y.

Iron and Coal Trades Review. Illus. Friday. 6d. Pub. by J. G. Leigh, 342 Strand, W. C., London.

Iron and Steel Trades Journal, (Formerly Iron Trade Exchange). Saturday. 6d. Pub. Samuel Griffiths & Co., lim., 82 Cannon St., E. C., London.

Iron Industry Gazette. Monthly. Ed. by McFaul and Nolan. \$1.50 per year. Office: Cor. Pearl and Seneca Sts., Buffalo, N. Y.

Ironmonger. Illus. Saturday. 6d. Pub. by E. P. Halse, 42 Cannon St., E. C., London.

Ironmonger. Monthly. Ed. by Chas. E. Brackett. \$1.00 per year, Pub. by the Ironmonger Co., 150 Dearborn St., Chicago, Ill.

Ironmonger Diary and Text Book. Annually. November. Gratis to Subscribers. Pub. by E. P. Halse, 42 Cannon St., E. C., London.

Ironmonger's Journal. Monthly, issued on the 15th. 6d. Pub. by C. Denston, 2 Fenchurch Buildings, Fenchurch St., E. C., London.

Ironmongery. Illus. Saturday. 6d. Pub. Office: 105 Strand, W. C., London.

Iron Trade Review. Thursday. Ed. by Wm. M. Day. \$3.00 per year. Pub. by the Cleveland Printing and Publishing Co., St. Clair and Wood Sts., Cleveland, Ohio.

Ironworker's Journal. Organ of the Amalgamated Malleable Iron workers of Great Britain. Monthly. 1d. Pub. by E. Trow, 8 Grange Road, Darlington, England.

Journal of Commerce and Cotton, Wool and Iron. Saturday. \$3.00 per year. Office: 128 Purchase St., Boston, Mass.

Journal of domestic Appliances. (Formerly *Sewing Machine Gazette*). Illus. Monthly. 4d. Pub. by E. W. Allen, 4 Ave Maria Lane, E. C., London.

Journal of the Franklin Institute. Monthly. \$5.00. Pub. by the Franklin Institute of the State of Penn'a., 15 South 7th St., Philadelphia, Pa.

Journal of the Iron and Steel Institute. Halfyearly: January, July. 16s. Pub. by E. & F. N. Spon, 125 Stand, W. C., London, and 12 Cortlandt St., New York.

Journal of the United States Association of Charcoal Iron Workers. Monthly. Ed. by J. Birkinbine. \$3.00 per year. Office: 25 N. Juniper St., Philadelphia, Pa.

Junior American Mechanic. Monthly. Ed. by E. S. Deemer. \$1.00 per year. Pub. by the Junior American Mechanic Pub. Association, P. O. Station A., Philadelphia, Pa.

Kansas Miller and Manufacturer. Monthly. Ed. by C. B. Hoffman. \$1.00 per year. Pub. by the Industrial Pub. Co., Enterprise, Kansas.

Lock and Bell. Monthly. Ed. and pub. by Wm. Byrnes. \$1.00 per year. Office: 229 Broadway, New York, N. Y.

Locomotive Engineer. Monthly. Ed. by John A. Hill. \$1.00 per year. Pub. by the American Machinist Pub. Co., 96 Fulton St., New York, N. Y.

McGregor's Marine Engineer's Annual. September. 1s. Pub. by McGregor & Co., 37 Clyde Place, Glasgow.

Machinery. Illus. Quarterly: January, April, July, October. 6d. Pub. by W. E. Fox, 75 Godwin St., Bradford, England.

Machinery Exporter. Being a supplement to the *Machinery Market*. Illus. Quarterly. 1s. Pub. Office: 181 Queen Victoria St., E. C., London.

Machinery Market. Illus. Monthly. 6d. Pub. Office: 181 Queen Victoria St., London.

Machinery Mart. Monthly. 1½d. Pub. by Dineen & Co., Queen St., Leeds, England.

Manufacturer and Inventor. Illus. For Manuf., Engineers, Electricians, Machinist's, etc. Monthly, the 15th. 6d. Pub. by Feilden & Co., Temple Chambers, Temple Lane, E. C., London.

Marine Engineer. Comprising Ship-building, and Steam navigation. Illus. Monthly. 6d. Pub. by W. G. Neal, 3 Amen Corner, Paternoster Row, E. C., London.

Martineau and Smith's Trade Journal, (Formerly Martineau and S.'s Monthly Trade Circular). Illus. Monthly. 5s per year. Pub. by Martineau & Smith, Holloway Head, Birmingham.

Master Steam Fitter. Monthly. Ed. by A. Bement. \$1.00 per year. Pub. by The Engineer's Pub. Co., Lakeside Building, Chicago, Ill., and 181 Broadway, New York, N. Y.

Mechanic. Saturday. Ed. by Wm. Wilson. 75c per year. Pub. by Wilson and Barsachs, 1100 N. Broadway, St. Louis, Mo.

Mechanical News. Semi-monthly. \$1.00 per year. Pub. by James Leffel & Co., 110 Liberty St., New York, N. Y.

Mechanical World. Illus. Saturday. 1d. Pub. by Emmott & Co., New Bridge St., Manchester and 6 York St., Covent Garden, London.

Mechanics. Monthly. Ed. by Henry Harrison Suplee. \$1.00 per year. Pub. by John M. Davis, 430 Walnut St., Philadelphia, Pa.

Merchant, Miller, and Manufacturer. Monthly. Ed. by A. R. Rivet. \$1.00 per year. Pub. by the Valley Pub. Co., Republic Building, St. Louis, Mo.

Metal Worker. Saturday. Ed. by Jas. C. Bayles and A. O. Kittredge. \$2.00 per year. Pub. by Dav. Williams, 66, 68 Duane St., New York, N. Y.

Miller. Monthly. Ed. by C. K. Reifsneider. \$1.00 per year. Pub. by the Midland Pub. Co., 506 Olive St., St. Louis, Mo.

Miller. Technical issue, monthly. 5s per year. Pub. by W. Dunham, 24 Mark Lane, E. C., London.

Miller's Review. Organ of the Penn'a Miller's State Association. Monthly. Ed. and pub. H. L. Everett. \$1.00 per year. Office: 227 S. 6th St., Philadelphia, Pa.

Milling World and Chronicle of the Grain and Flour Trade. Monday. Ed. by McFaul and Nolan. \$1.50 per year. Office: Cor. Pearl and Seneca Sts., Buffalo, N. Y.

Millstone and Corn Miller. Monthly. Ed. by D. H. Ranck and L. H. Gibson. \$1.00 per year. Pub. by the D. H. Ranck Pub. Co., Indianapolis, Ind.

Mining Engineer. Monthly. 2½d. Pub. by the Associated Miner's Corporation, Grampound Road, London.

Modern Miller. Monthly. Ed. and pub. by Clifford F. Hall, Kansas City, Mo. \$1.00 per year.

Municipal Review. Friday. 6d. Pub. by S. W. Norton, 12 Catherine St., W. C., London.

Municipal World. Wednesday. 24s per year. Office: 337 Strand, W.C., London.

National Car and Locomotive Builder. Monthly. Ed. by Angus Sinclair. \$1.00 per year. Pub. by R. M. Van Arsdale, 140 Nassau St., New York, N. Y.

National Steamship and Railway Gazette. Monthly. Ed. by E. S. S. Kemp. \$1.00 per year. Office: 65 Mozart St., Chicago, Ill.

New England Stove, Hardware, and House Furnisher. Monthly. \$1.00 per year. Pub. by C. C. Walden & Co., Springfield, Mass., and 29 Park Row, New York, N. Y.

Northwestern Mechanic. Monthly. Ed. by James F. Hobart. Pub. by the Northwestern Mechanic Co., Minneapolis, Minn.

Northwestern Miller. Friday. Ed. and pub. by C. M. Palmer, Minneapolis, Minn. \$2.00 per year.

Northwestern Railroader. Friday. Ed. and pub. by H. P. Robinson, Minneapolis, Minn. \$3.00 per year.

Official Railway Equipment Guide. Monthly. Ed. by S. P. Sechrist. \$3.00 per year. Pub. by J. B. Savage, Cleveland, Ohio.

Pacific Coast Wood and Iron. Monthly. Ed. and pub. by S. L. Everett, \$1.50 per year. Office: 4 California St., San Francisco, Cal.

Patent Review. Monthly. \$1.00 per year. Ed. and pub. by A. Harvey, Ottawa, Ont., Canada.

Phillips' Machinery Register. Illus. Monthly. 6d. Pub. by C. D. Phillips, Newport, (Monmouth) England.

Plumber and Decorator, and Journal of Gas and Sanitary Engineering. Illus. Monthly. 6d. Pub. by Dale, Reynolds & Co., 24 Wellington St., Strand, W. C., London.

Plumber's Trade Journal. Semi-monthly. Ed. by James M. Heatherton. \$1.00 per year. Office: 66 Beekman St., New York, N. Y.

Power and transmission. Monthly. Ed. by Ed. A. Jernegan. \$1.00 per year. Pub. by the Power and Transmission Pub. Co., Mishawaka, St. Joseph Co., Ind.

Power-Steam. Monthly. Ed. and pub. by H. M. Swetland. \$1.00 per year. Office: 118 Liberty St., New York, N. Y.

Practical Engineer. Illus. Friday. 1d. Pub. by the Technical Pub. Co., Ifm., 3 Grosvenor Chambers, Deansgate, Manchester, and 282 Strand, London.

Practical Mechanic. Monthly. Ed. by A. B. Grimes. \$1.00 per year. Pub. by F. S. Blanchard & Co., Worcester, Mass.

Proceedings of the Association of Municipal and Sanitary Engineers and Surveyors. Issued annually, about Sept. 10s 6d. Pub. by E. & F. N. Spon, 125 Strand, W. C., London.

Proceedings of the Institution of Civil Engineers. February, May, August, November. Gratis to members. W. plates. Office: 25 Great George St., Westminster, S. W., London.

Railroad and Engineering Journal. Monthly. Ed. and pub. by M. N. Forney. \$3.00 per year. Office: 145 Broadway, New York, N. Y.

Railroad Gazeteer. Monthly. Ed. by B. F. Giddings. \$1.00 per year. Pub. by H. S. Crocker, 110 Sutter St., San Francisco, Cal.

Railroad Gazette. Friday. Ed. by H. G. Trout & B. B. Adams, jr. \$4.20 per year. Pub. by the Railroad Gazette Co., 78 Broadway, New York, N. Y.

Railroad Topics. Monthly. Ed. by C. D. Galvin. \$1.00 per year. Office: 35 Frankfort St., New York, N. Y.

Railway Age. Friday. Ed. by E. H. Talbott and H. R. Hobart. \$4.00 per year. Pub. by the Railway Age Pub. Co., 205 La Salle St., Chicago, Ill., and 45 Broadway, N. Y.

Railway and Corporation Law Journal. Saturday. Ed. by Chas. F. Beach, jr. \$10.00 per year. Office: 95 Nassau St., New York, N. Y.

Railway and Shipping Contractor. Monthly. 6d. Pub. by W. Biggar, 27 Chancery Lane, W. C., London.

Railway Diary and Official's Directory. Annually. December. 1s. Pub. by McCorquodale & Co., lim., Cardington St., N. W., London.

Railway Engineer. Illus. Monthly. 2s. Pub. by E. W. Allen, 4 Ave Maria Lane, E. C. London.

Railway Herald. Saturday. 1d. Pub. by the Railway Press Co., lim., 73 Southampton Buildings, Chancery Lane, W. C., London.

Railway Life. Monthly. Ed. by A. C. Campbell. \$1.00 per year. Pub. by W. B. and A. C. Campbell, Toronto, Ont., Canada.

Railway Master Mechanic. Monthly. Ed. by E. N. Lewis. \$1.00 per year. Pub. by the Railway Purchasing Agent Co., 816 Broadway, New York, N. Y.

Railway News. Monthly. \$2.00 per year. Office: 32 Cortlandt St., New York.

Railway News and Joint Stock Journal. Saturday. 6d. Pub. Office: 3 Whitefriars St., Fleet St., E. C., London.

Railway Official Gazette. (Formerly *Railway Fly-Sheet*). Monthly, issued the 15th. 1d. Pub. by McCorquodale & Co., lim., Cardington St., N. W. London.

Railway Press. Journal on practical Railway Working, Engineering, and Construction. Friday. 4d. Pub. by the Railway Press Co., lim., 73 Southampton Buildings, Chancery Lane, W. C., London.

Railway Record. Register of Railway and Joint Stock Enterprise. Wednesday. 6d. Pub. Office: 17 East Temple Chambers, Fleet St., E. C., London.

Railway Review. Friday. 1d. Pub. Office: 55 Colebrooke Row, Islington, N., London.

Railway Review. Saturday. Ed. by W. D. Crosman and Willard A. Smith. \$4.00 per year. Pub. by the Railway Review Pub. Co., 185 Dearborn St., Chicago, Ill., and 189 Broadway, New York, N. Y.

Railway Register. Saturday. Ed. by C. I. Ingerson. \$4.00 per year. Manager: D. McArthur, 304 N. 8th St., St. Louis, Mo.

Railway Service Gazette. Thursday. Ed. by W. R. Leflet. \$2.00 per year. Pub. by the Railway Service Gazette Pub. Co., Toledo, Ohio.

Railway Supplies Journal. (Formerly *Railway Gazette*.) Illus. Saturday. 6d. Pub. Office: 24 Bouvierie St., E. C., London.

Railway Times. Saturday. 5d. Pub. by H. Allen, 2 Exeter St., Strand, W. C., London.

Railway World. Saturday. \$4.00 per year. Office: 420 Library St., Philadelphia.

Reports of the Sanitary Assurance Association. Annually, February. Price varies from 21s. Pub. Office: 5 Argyll Place, W., London.

Roller Mill. Monthly. Ed. by Chas. S. Parke, \$1.00 per year. Pub. by Edwin L. Burdick & Co., 56 Pearl St., Buffalo, N. Y.

Ryland's Iron Trade Circular. Saturday. 21s per year. Pub. Office: 46 Union Passage, Birmingham.

Safety Valve. Monthly. Ed. by C. W. Sutherland. \$2.00 per year. Pub. by F. W. Gade, 120 Broadway, New York, N. Y.

Sanitary Engineering, with which is incorporated *The Sanitary Engineer*, and the *Sanitary Register*. Saturday. 2d. Pub. by J. Beveridge, 47 Fetter Lane, E. C., London.

Sanitary Era. Monthly. Ed. and pub. by Wm. C. Conant. \$1.00 per year. Address: P. O. Box 3059, New York, N. Y.

Sanitary Journal. Monthly. 6d. Pub. by A. Macdougall, 7 Mitchell Lane, Glasgow.

Sanitary News. Saturday. Ed. by A. H. Harryman. \$2.00 per year. Pub. by Thomas Hudson, 88, 90 La Salle St., Chicago, Ill.

Sanitary Plumber. Semi-monthly. Ed. by S. Lloyd. \$1.00 per year. Pub. by the Hydraulic and Sanitary Plumber Pub. Co., lim., 23 Park Row, New York, N. Y.

Sanitary Record. Monthly. 1s. Pub. by Allen & Co., 18 Waterloo Place, S. W., London.

Saw Mill Gazette. Monthly. Ed. and pub. by M. T. Richardson. \$1.00 per year. 86 Reade St., New York, N. Y.

Science Amateur and Home Artisan. Monthly. Ed. by W. F. Underwood. \$1.00 per year. Pub. by A. L. Chatterton & Co., 78 Maiden Lane, New York, N. Y.

Scientific American. Saturday. \$3.00 per year; Export edition, monthly, \$5.00 per year; Spanish edition for South America: *La America Cientifica Industrial*, monthly \$3.00 per year; Architects' and Builder's edition, monthly, \$2.50 per year. Munn & Co., editors and publishers, 361 Broadway, New York, N. Y.

Scientific American Supplement. Saturday. Ed. and pub. by Munn & Co. \$5.00 per year; \$7.00 together with the *Scientific American*. Office: 361 Broadway, New York, N. Y.

Sewing Machine Advance. Monthly. Ed. by Walter Scates. \$1.00 per year. Office: 158 South Clark St., Chicago, Ill.

Sewing Machine and Cycle News, with which is incorporated the *Cycling Times*. Saturday. 1d, Pub. by W. McWilliam, 2 Whitefriars St., E. C., London.

Sewing Machine News. Monthly. Ed. and pub. by Chas. W. Handy. \$1.00 per year. Office: Potter Building, 38 Park Row, New York, N. Y.

Sewing Machine World. Quarterly. English, French, German, and Spanish. \$1.00 per year. Ed. and pub. by Emile James, 44 Clinton Place, New York.

Southern Industrial Railroad Record. Monthly. Ed. by A. L. Harris. \$1.00 per year. Pub. by the Record Pub. Co., Atlanta, Ga.

Stationary Engineer. Monthly. \$1.00 per year. Pub. by the Engineer's Co., 9 Lakeside Building, Chicago, Ill., and 181 Broadway, New York, N. Y.

Stone. Monthly. Ed. by L. H. Gibson. \$2.00 per year. Pub. by D. H. Ranck Pub. Co., Indianapolis, Ind.

Stoves and Hardware. Thursday. Ed. by T. S. Bowman. \$2.00 per year. Office: 522 N. 3d St., St. Louis, Mo.

Street Railway Gazette. Monthly. \$2.00 per year. Pub. by the Gazette Co., 8 Lakeside Building, Chicago, Ill., and 181 Broadway, New York, N. Y.

Street Railway Journal. Monthly. Ed. by E. P. Harris. \$2.00 per year. Pub. by the American Railway Pub. Co., 113 Liberty St., New York, N. Y.

Transactions of the American Society of Civil Engineers. Monthly. Ed. by John Bogart. Pub. by the American Society of Civil Engineers, 127 E. 23d Street, New York, N. Y.

Transactions of the Sanitary Institute of Great Britain. Annually, June. 10s 6d. Pub. by E. Stanford, 26 Cockspur St., Charing Cross, S. W., London.

Transactions of the Society of Engineers. Illus. Annually, 12s 6d. Pub. by E. & F. N. Spon, 125 Strand, W. C., London, and 12 Cortlandt St., New York.

United States Miller and Milling Engineer. Monthly. Ed. and pub. by E. Harrison Cawker. \$1.00 per year. Office: 124 Grand Ave., Milwaukee, Wis.

United States Sewing Machine Times. Saturday. Ed. by Fred. Bell. \$1.00 per year. Pub. by the Bell Pub. Co., 884 Broadway, New York, N. Y.

Universal Engineer. Being the foreign supplement to the *Ironmonger*. Every fourth Saturday. 6d. Pub. by E. P. Halse, 42 Cannon St., E. C., London.

Water Works Statistics. Annually, April. 2s 6d. Pub. by C. W. Hastings. 22 Buckingham St., Strand, W. C., London.

Western Fireman. Wednesday. Ed. and pub. by J. S. Bloomington. \$2.00 per year. Office: 177 La Salle St., Chicago, Ill.

Western Machinist. Semi-monthly. Ed. by F. N. Carter. \$1.00 per year. Office: 29 Euclid Ave., Cleveland, Ohio.

Work. Illus. Wednesday for Saturday. 1d.; the same, monthly, 6d. Pub. by Cassell & Co., lim., La Belle Sauvage, Ludgate Hill, E. C., London.

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